



# UNITED STATES PATENT AND TRADEMARK OFFICE

ANNA  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/421,322	10/18/1999	HIROYUKI OI	PM-264817/OS	3971
909	7590	01/14/2004	EXAMINER	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			ECKERT II, GEORGE C	
		ART UNIT	PAPER NUMBER	
		2815		
DATE MAILED: 01/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>09/421,322</b>	Applicant(s) <b>Oi et al.</b>
	Examiner <b>George C. Eckert II</b>	Art Unit <b>2815</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1)  Responsive to communication(s) filed on Nov 24, 2003.

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

#### Disposition of Claims

4)  Claim(s) 1, 3, 5, 6, 10, and 11 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 3 is/are allowed.

6)  Claim(s) 1, 5, and 11 is/are rejected.

7)  Claim(s) 6 and 10 is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1)  Notice of References Cited (PTO-892)

4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)

5)  Notice of Informal Patent Application (PTO-152)

3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_

6)  Other: \_\_\_\_\_

Art Unit: 2815

## **DETAILED ACTION**

### *Response to Amendment*

1. Applicant's amendment dated October 15, 2003 in which claim 3 was amended and claim 9 was canceled, and Applicant's amendment dated November 24, 2003 in which claims 10 and 11 were newly added have been entered of record. Claims 1, 3, 5, 6, 10 and 11 are pending.

### *Claim Rejections - 35 U.S.C. § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 493 116 to Ohta et al. (from IDS, Paper #12). Ohta et al. teach, with reference to figures 1a to 1o, a dielectrically separated wafer 13 having a plurality of dielectrically separated monocrystalline silicon islands (note the islands are formed from silicon layer 1 which is a doped monocrystalline silicon layer, col. 4, line 3), mutually defined by a dielectrically separating oxide film 6 on the surface of the wafer, wherein the dielectrically separated islands 12 comprise:

a high concentration impurity layer 2 (col. 4, line 6) formed on the bottom of the islands in a flat plate form; and

Art Unit: 2815

a low concentration impurity layer 12 having an identical conductivity (n-, col. 4, line 3) laminated on the plate of the high concentration layer.

With regard to claim 5, Ohta et al. teach, with reference to figures 1n and 1o, a dielectrically separated wafer having a plurality of dielectrically separated monocrystalline silicon islands 12, separated by a dielectrically separating oxide film 6 on the wafer surface, the dielectrically separated wafer comprises a surface between one dielectrically separated silicon island and another neighboring dielectrically separated silicon island formed so as to be flat (see figures 1n and 1o which shows that the separated wafer has a surface between the distinct island), by controlling the polishing (grinding) of the silicon and dielectric layer (col. 7, lines 20-31).

With regard to claim 11, Ohta et al. teach in figure 1o that the surface area of each of the silicon islands 12 substantially occupy the wafer surface.

***Allowable Subject Matter***

3. Claim 3 is allowed. Claims 6 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1 and 5 have been considered but are not persuasive. Applicant argues regarding claims 1 and 5 that Ohta et al. is not an anticipatory

Art Unit: 2815

reference as it does not teach a surface flatness of less than 0.2  $\mu\text{m}$ . However, neither claim 1 nor claim 5 includes such limitation. Claim 1 is silent with respect to flatness and claim 5 merely says the surface is "flat." Moreover, the instant specification has not defined "flat" to require a specific numerical flatness. Ohta et al. teach the instant limitations of claims 1 and 5 as discussed in the above rejections. Specifically, Ohta et al. clearly show in figure 10 a surface of a wafer that is flat. As such, the argument is not persuasive.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Eckert II whose telephone number is (703) 305-2752 (after Feb. 9, (571) 272-1728).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Tom Thomas can be reached on (703) 308-2772. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

*GE*  
GEORGE ECKERT  
PRIMARY EXAMINER